

1117. "In the night of the XVIIth of the Kal. of January (Dec. 16th), the heaven was seen very red, as if it were a conflagration." *Sax. Chron.* The interval from 1096 gives two periods of 10·5 years, and in the following year, 1118, the Chinese record Sun-spots.

1122. "There were many shipmen on the sea, and on (fresh) water, who said that they saw in the north-east a great and broad fire near the earth, which at once waxed, in length, up to the sky, and the sky separated into four parts, and fought against it, as if it would quench it; but the fire nevertheless waxed up to the heavens. The fire they saw in the dawn, and it lasted so long till it was light over all. That was on the day the VIIth of the Ides of December (Dec. 7th)." *Sax. Chron.* The account reminds one of Stowe's description of a fine aurora in the time of Queen Elizabeth. It was but a short interval from the last display in 1117, but the Chinese records speak of Sun-spots being seen the next year, in 1123. We must therefore conclude that the Sun's disc was in a very active state about this time, and according to Dr. Wolf there have been intervals of only  $7\frac{1}{2}$  years in modern times between the maxima.

1131. "This year after Christmas, on a Monday night, at the first sleep, the heaven was, on the north side, all as though it were a burning fire, so that all who saw it, were so affrighted as they never were before. That was on the IIIrd of the Ides of January (Jan. 11th)." *Sax. Chron.* An interval of nine years from the last. It will be observed that it was witnessed three ten-year periods before the spot of the Spanish Moor Averroës (1161). The Chinese have numerous records of solar spots in this century, the 12th, and also in the 4th. The *Chronicon Scotorum* and *Anglo-Saxon Chronicle* contain no mention of these phænomena.

*Abbenhall Rectory, Gloucester,*  
1880, June 9.

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*On the Refractive and Dispersive Powers of various Samples  
of Glass. By Mr. J. G. Lohse.*

(Communicated by Lord Lindsay.)

With a view to obtaining a knowledge of the refractive and dispersive powers of various sorts of glass now in actual use, the prisms have recently been examined at Dun Echt Observatory by Mr. J. G. Lohse. Prisms 1 to 8 were kindly lent by Mr. Hilger with the option of purchasing any or all of them except No. 8, which was a beautiful sample prism of an object-glass in course of construction. Nos. 9 and 10 were supplied by Mr. Grubb as closely resembling the lenses of the Dun Echt 15·06-in. refractor.

The indices of refraction are for vacuum-glass.

The specific gravities are reduced to vacuum and 0° Cent. in terms of water at its greatest density.

No.	Sort of Glass.	Specific Gravity.	B	C	D	E	F	G	H
1	Light Flint	3.2177	1.57816	1.57955	1.58369	1.58894	1.59355	1.60267	1.61073
2		3.1530	1.56416	1.56558	1.56945	1.57449	1.57890	1.58750	not quite so colourless as Nos. 2, 3, and 4.
3		3.5165	1.60510	1.60679	1.61147	1.61767	1.62316	1.63399	1.59502 colourless.
4	to	3.6155	1.61470	1.61647	1.62138	1.62787	1.63355	1.64469	1.64421 colourless.
5		4.1408	1.68539	1.68770	1.69388	1.70207	1.71001	1.72501	1.65491 colourless.
6		4.4374	1.70422	1.70664	1.71346	1.72241	1.73068	1.74689	slightly greenish-yellow, closely resembling the colour of chlorine.
7	Extra dense Flint	4.9566	1.77362	1.77669	1.78537	1.79697	1.80771	1.82917	decidedly greenish-yellow; chlorine colour.
8	Crown (Feil)	2.4688	1.50522	1.50621	1.50867	1.51175	1.51451	1.51964	very strongly greenish-yellow, about $1\frac{1}{2}$ times the intensity of No. 6, but nevertheless apparently just as transparent, if not more so, and, considering the much greater dispersive power, a better prism.
9	Crown (Chance)	2.4728	1.51151	1.51254	1.51488	1.51804	1.52073	1.52587	1.84913 colourless.
10	Flint (Chance)	3.6619	1.61706	1.61868	1.62365	1.63012	1.63594	1.64775	1.53023 colourless.
									1.65828 colourless.

Corrections to *Monthly Notices*, present volume, p. 438.

In the column  $\Delta\delta$  the minus sign applies to all the quantities.

In the column "Observer" for T. G. L. read J. G. L.

After the observations insert: The observers were J. Gerh. Lohse and Ralph Copeland.